Title (en)

METHOD AND DEVICE FOR TARGET TRACKING, AND STORAGE MEDIUM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ZIELVERFOLGUNG UND SPEICHERMEDIUM

Title (fr)

PROCÉDÉ ET DISPOSITIF DE SUIVI DE CIBLE, ET SUPPORT D'INFORMATIONS

Publication

EP 4310781 A1 20240124 (EN)

Application

EP 23185294 A 20230713

Priority

CN 202210870624 A 20220722

Abstract (en)

A method for multi-target multi-camera tracking includes: performing multi-target tracking on an image sequence captured by each of a plurality of cameras, to extract a tracklet for each target appearing in the image sequence; extracting a feature for each of the plurality of tracklets extracted; calculating a similarity between any two of the plurality of tracklets based on the extracted features, to establish a similarity matrix; performing clustering based on the similarity matrix so that tracklets potentially related to a target are aggregated in a set; sorting the tracklets in the set in a temporal order to generate a tracklet sequence; filtering the tracklets in the set based on at least one of a similarity, a time distance, and a space distance between the tracklets; and using the tracklets in the filtered set as tracking information for the corresponding target.

IPC 8 full level

G06T 7/292 (2017.01)

CPC (source: CN EP US)

G06T 7/246 (2017.01 - CN); **G06T 7/292** (2017.01 - EP); **G06T 7/73** (2017.01 - CN); **G06V 10/44** (2022.01 - CN); **G06V 10/761** (2022.01 - US); **G06V 10/762** (2022.01 - US); **G06V 10/764** (2022.01 - CN); **G06V 20/46** (2022.01 - US); **G06V 20/52** (2022.01 - US); G06T 2207/10016 (2013.01 - CN); G06T 2207/30232 (2013.01 - EP); G06T 2207/30241 (2013.01 - CN EP)

Citation (applicant)

- ERGYS RISTANICARLO TOMASI: "Features for multi-target multi-camera tracking and re-identification", PROCEEDINGS OF IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION, 2018, pages 6036 - 6046, XP055590909, DOI: 10.1109/CVPR.2018.00632
- PENG LIJIABIN ZHANGZHENG ZHUYANWEI LILU JIANGGUAN HUANG: "State aware re-identification feature for multi-target multi-camera tracking", IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION, 2019
- KHA GIA QUACHPHA NGUYENHUU LETHANH DAT TRUONGCHI NHAN DUONGMINH TRIET TRANKHOA LUU: "Dyglip: A dynamic graph model with link prediction for accurate multi-camera multiple object tracking", ARXIV: COMPUTER VISION AND PATTERN RECOGNITION, 2021
- ZHANG, YSUN, P. ET AL.: "Bytetrack: Multi-Object Tracking by Associating Every Detection Box", ARXIV: 2110.06864, 2021
- K. ZHOUY. YANG ET AL.: "Omni-Scale Feature Learning for Person Re-Identification", ICCV, 2019, pages 3702 - 3712

Citation (search report)

- [XDYI] LI PENG ET AL: "State-Aware Re-Identification Feature for Multi-Target Multi-Camera Tracking", 2019 IEEE/CVF CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION WORKSHOPS (CVPRW), IEEE, 16 June 2019 (2019-06-16), pages 1506 - 1516, XP033747260, DOI: 10.1109/CVPRW.2019.00192
- [X] ZHANG ZHIMENG ET AL: "Multi-Target, Multi-Camera Tracking by Hierarchical Clustering: Recent Progress on DukeMTMC Project", ARXIV.ORG, 27 December 2017 (2017-12-27), Ithaca, XP093109065, Retrieved from the Internet <URL:https://arxiv.org/pdf/1712.09531.pdf> [retrieved on 20231205], DOI: 10.48550/arxiv.1712.09531
- [YD] ZHANG YIFU ET AL: "ByteTrack: Multi-Object Tracking by Associating Every Detection Box", 14 October 2021 (2021-10-14), XP055945714, Retrieved from the Internet <URL:https://arxiv.org/pdf/2110.06864v2.pdf> [retrieved on 20220725]
- [Y] TRAN DUONG NGUYEN-NGOC ET AL: "A Robust Traffic-Aware City-Scale Multi-Camera Vehicle Tracking Of Vehicles", 2022 IEEE/CVF CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION WORKSHOPS (CVPRW), IEEE, 19 June 2022 (2022-06-19), pages 3149 - 3158, XP034174469, DOI: 10.1109/CVPRW56347.2022.00355

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4310781 A1 20240124; CN 117474947 A 20240130; JP 2024014783 A 20240201; US 2024029398 A1 20240125

DOCDB simple family (application)

EP 23185294 A 20230713; CN 202210870624 A 20220722; JP 2023115613 A 20230714; US 202318356272 A 20230721